

REMARKS

An Office Action was mailed on November 24, 2003. Claims 1 – 7 are currently pending in the application. With this response, Applicants add new claims 8 and 9. No new matter is introduced.

OBJECTION TO DRAWING

FIG. 8 is objected to as lacking an arrow showing decision step S105 looping back to step S102. Applicants propose revisions to FIG. 8 as indicated in replacement drawing sheets, including clean and marked-up versions that insert the missing arrow. Accordingly, Applicants respectfully request this proposed drawing change be accepted, and that the objection be withdrawn.

REJECTION UNDER 35 U.S.C. § 102

Claims 1 - 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,255,252 to Falk. Applicants respectfully traverse this rejection.

Applicants disclose a method, apparatus and program medium for rendering a texture onto a surface of a three-dimensional object model. Applicant's claimed method includes the steps of: a) dividing texture data into a plurality of texture lines each having a width of one dot, b) constructing a stereoscopic object, based on the plurality of texture lines, by projecting an image of each texture line as defined by a virtual light source together with associated color information, and c) defining an intersecting part between the stereoscopic object and the surface for rendering each texture line. In this manner, the object can be rendered using the shadow volume method to obtain a rendering that more accurately conforms to the three-dimensional surface.

As shown for example in Applicants' FIG. 7C, as an outcome of applying the shadow volume method to parallelepiped 540 formed from texture line 530, shadow color information for each dot of each texture line is stored in association with side surface 540a and a side surface opposite to side surface 540a (see, e.g., page 11, lines 1 – 17 of Applicants' specification). By rendering parallelepiped 540 only in write-allowed region 510 at the intersection of parallelepiped 540 and object 500, a projected image of texture line 530 is formed in the L-shaped region defined by write-allowed region 510.

Falk discloses a method for providing surface detail on a three-dimensional surface that preserves the dimensional integrity of the detail (see, e.g., abstract of Falk). The method of Falk allows for a two-dimensional "flattened" pattern to be computed in order to produce a desired two-dimensional design pattern on a three-dimensional surface (see, e.g., FIG. 2 of Falk). Falk discloses that the surface is approximated by a three-dimensional mesh used to compute a two-dimensional flattened pattern. However, unlike Applicants' claimed invention, Falk does not disclose or suggest further rendering each two-dimensional pattern as a series of texture lines by means of applying the shadow volume method to generate a projected image of each texture line on the three-dimensional surface. By using the shadow volume method to project individual texture lines onto the appropriate three-dimensional surfaces of object 500, Applicants' claimed method produces a rendering that far more accurately depicts the image as a composite image composed of individual projections for each of the texture lines (see, e.g., Applicants' FIGs. 7B - 7E)

Accordingly, Applicants respectfully submit that independent claims 1, 3, 5, and 7 are not anticipated by Falk, and are therefore allowable. As claims 2, 4 and 6 depend from allowable

claims 1, 3 and 5, Applicants further submit that claims 2, 4 and 6 are also allowable for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 - 9, consisting of independent claims independent claims 1, 3, 5, and 7 - 9, and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited.

However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



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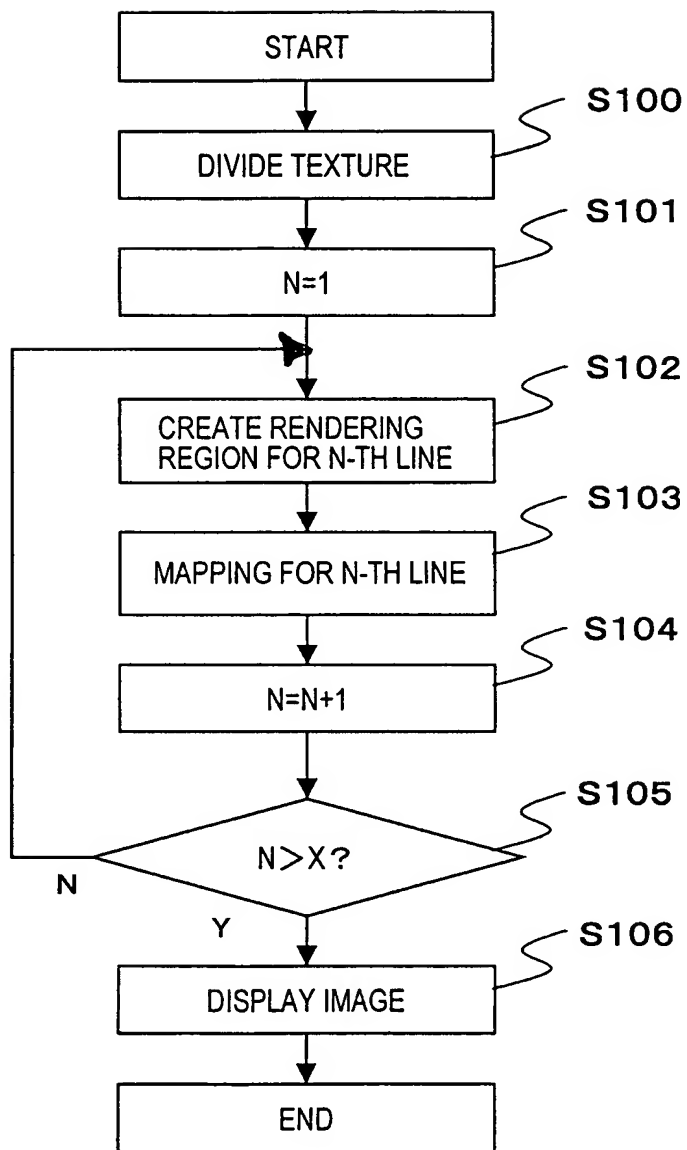
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FIG.8



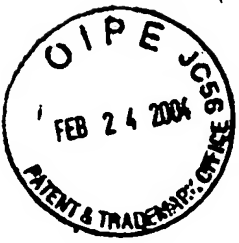


FIG.8

